

Case: Mining project and Tierra Amarilla's Community

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There are many ways to resolve conflicts between projects and communities. An Environmental Impact Assessment process can be a good opportunity to negotiate, avoiding legal actions and achieving justice.

I. INTRODUCTION

The mining project object of this article is an open pit and underground mine that produces copper concentrate, and is located in Tierra Amarilla, in the Northern part of Chile, 15 km from the city of Copiapó. This is a comprehensive project that includes an open pit mine, an underground mine as well as a processing plant and a port, among others.

The company has been a significant producer of copper since the mid-1990's. In the past five years, the annual payable copper in concentrates that was sold, varied between 147 and 191 kilotonnes.

In 2012, Tierra Amarilla's municipality, with its consultants, identified several environmental impacts on Tierra Amarilla's town as a consequence of the project's last 20 years of operation.

A new Environmental Impact Assessment (EIA) process, for a 15 years extension of the lifespan of the project, opened a window of opportunity to raise the problems detected by the community and propose an alternative solution instead the judicialization of the case. During this process, both sides started negotiations, obtaining benefits for both of the parties involved.

In this context, this paper seeks to present and describe a successful case of negotiation in a complex scenario, showing that it is possible to achieve agreements between a project and the community where it operates. Likewise, this case aims to be a relevant example that contributes to guiding other professionals, companies, and / or communities that are in similar situations.

II. CONTEXT

Chile, Mining Country

Chile is a country with large mineral reserves, so mining is the main productive activity in the country. Chile ranks first in world copper production. In 2016, Chile's copper production was 5.55 million metric tons. In addition, the country has a 28% share in world copper production and 29% share in world reserves (Chilean Mining Council, 2018).

The main products marketed by Chile are cathodes and copper concentrates, which are exported for processing and obtaining manufactured products. Their main objective has mainly been towards industrialized countries and nowadays, countries in processes of industrialization, such as China.

The territory

Tierra Amarilla municipality is located in the Atacama region, in the north of the country, in a territory that extends from north to south between the Copiapó river and mountain ranges which are rich in mining deposits. The surface area of Tierra Amarilla reaches 11,325 km² and its climate has arid desert characteristics.

According to the last Census (INE, 2017), Tierra Amarilla has a total population of 14,000 inhabitants. Of this total, 6% declare to belong to some ethnic group (Census, 2002) and 10% of the population is in poverty, a figure below the country level, which reaches 14% (Casen, 2013).

The main source of income for this territory is mining, which participation in the GDP of the Atacama region in 2015 was 30% and agriculture, mainly grapes. The commune belongs to the second region, among 16, with the highest GDP per capita in Chile, however, despite these economic figures, this territory has significant deficiencies in health and educational services.

The Mine

The mine is located in Chile's Atacama Province, Region III, in Tierra Amarilla's town, at an elevation of approximately 650 metres above sea level, 650 km north of Santiago.

The project consists of an open pit mine and an underground mine providing copper ore to an on-site concentrator with a capacity of 75,000 tonnes per day. The underground mine produce 13,750 tonnes per day. In 2016, the mine had a production of 161 KTMF (thousands of fine metric tons) of copper and is currently executing a \$ 400 MMUSD investment project. The project is about extending the lifespan of the current operation to at least until the year 2030, through the exploitation of approximately 200 million additional tons of ore.

III. CONFLICT

The municipality, led by the mayor, wanted to file a lawsuit against the mining company for repairing environmental damage in Tierra Amarilla's territory. An independent technical assessment identified several environmental impacts, being the most serious ones:

- Air pollution: Progressive increase of particulate material, exceeding regulation quality limits.
- Impact of the quality of the soil, with high concentrations of copper, chromium and mercury.
- Important degradation of groundwater quality.
- Decrease of the water table in more than 84 meters.

- The Copiapó river flow has decreased progressively in recent years.
- Extreme impact on the landscape and the scenic value of the Tierra Amarilla town.
- Important impacts related to noise and vibrations due to mining activities.
- Change in the climate of the town of Tierra Amarilla.
- Sterile deposits have progressively decreased the amount of the town's daylight.

To carry out the lawsuit, the municipality hired a team of expert advisers in environmental conflicts, who once they had studied the case and looked into the social, environmental and administrative project background, decided to modify the judicialization and give way to negotiations between the parties. There were two main elements that contributed to make this decision:

- a) There was a just cause, due to the amount of impacts and their magnitude. Nobody who knows about environmental issues could deny these impacts to Tierra Amarilla's town. This issue was impossible to ignore and constituted a strength that favoured the municipality's position.
- b) The company wanted to increase its lifespan for 15 more years, so they were developing an Environmental Impact Assessment, in which the voice and the vote of municipality was relevant. The project needed the municipality as a partner in this process.

IV. THE NEGOTIATION

Both parties sat down around a table and started a dialogue in which the company and the municipality agreed to the rules or the framework of the negotiation. Each party presented their interests and ensured the will to reach a consensus. Then, at the same table, it discussed the damages, both in environmental components and in US dollars. They were optimistic about the negotiation because there were some ingredients that favoured it:

- Willingness to have a dialogue: The company hired a famous Chilean mediator to start the dialogue.
- Willingness to reach consensus: Reaching consensus is the key to a successful negotiation process, however, it implies that the parties give in to their positions and often renounce to something in order to avoid the alternative cost (judicialization). In this case, the mining company was willing to share some of its economic benefits and to improve the way that it had been operating for years. In relation to the money, the company offered a figure that was in the expected range. That was an important milestone, there was common ground.
- Willingness to achieve shared benefits: The company was willing to improve the environmental performance. Both benefits would be given once the environmental permit was approved.

V. RESULTS

The negotiation between the company and the Municipality of Tierra Amarilla was successful because both parties achieved their objectives:

- ✓ Judicialization was avoided.
- ✓ The community achieved environmental justice:
 - An economic compensation was obtained.
 - The environmental impacts being caused on the territory were stopped.
 - The mine, which is the most important source of income to the territory, kept functioning.
- ✓ The company obtained the municipality's support and the social license to operate.
- ✓ The environmental permit for the project was obtained, so the mine increased the lifespan of the project.

VI. CONCLUSIONS

In Chile there are many situations where projects are paralyzed due to conflicts that have been judicialized which translates into loss and considerable economic stagnation. Conflicts are very costly for all parties, because it requires time and money without certainty which the result will be. For this reason, generating the opportunity for dialogue and establishing a negotiation process among the parties becomes a real alternative. In this case, a new Environmental Impact Assessment turned out to be the conjuncture that led to the start of a dialogue that was of interest to both parties.

This experience in Tierra Amarilla demonstrates that, in order to resolve a socio-environmental conflict, it is possible to negotiate whenever the parties show their real interests and have the will to reach an agreement, which implies, sometimes giving in to some of their positions. The negotiation becomes successful when the benefits exceeds what has been lost and both parties have won.

In conclusion, if a cause is just, there is a good chance for a successful negotiation between the community and a Project that could avoid a lawsuit in order to obtain environmental justice.

VII. REFERENCE

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